SubliJet IQ™

Getting Started Guide

For EPSON Stylus® C88

Revision 12/2005

SubliJet IQ™
Getting Started Guide for the EPSON Stylus® C88

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Introduction

Congratulations on your purchase of SubliJet IQ™ digital transfer inks. The SubliJet IQ™ sublimation ink cartridges are the latest advancement for the EPSON Stylus C88 from Sawgrass Technologies, Inc., a leader in the development of digitally driven color transfer technologies and related products.

With this system, your printed images can be transferred onto any product designed to accept sublimation dyes including: ceramic, metal, tiles, mylar, polyester fabric, performance wear, TEC Film™, TEC Tile™, UniSub®, and Hanes Soft L'Ink® T-shirts, resulting in an attractive, durable product. Your imagination is the limit for producing brilliant, near photo-quality images on caps, clipboards, clocks, mugs, mousepads, plaques, puzzles, synthetic T-shirts, and more. SubliJet IQ™ is ideal for markets that personalize, customize or create short-run output.

In addition, your system is bundled with PowerDriver IQ™, a user-friendly color management software package that allows the user to create flawless transfers in less time. The "Fast Copies" option reduces print time by automatically spooling the file to the printer only once regardless of the number of copies. Design time is also condensed by utilizing the ColorSure Palette. The color palette contains 160 more spot colors and the custom palette gives users the ability to add, edit, import or export colors, thus streamlining the color matching process. Instructions for installation and use of this system can be found in this User's Guide.

This document contains information for using SubliJet IQ™ inks and helpful tips are also provided for getting the best results from your transfers. The information provided pertains only to the use of SubliJet IQ™ in your EPSON Stylus C88 printer. If you have questions about the operation of your EPSON printer, refer to the *EPSON Stylus C88 Printer User's Guide.*

Technical support is available from your Authorized SubliJet reseller or directly from Sawgrass Technologies, Inc. See the section entitled *Technical Support* for additional information.

We at Sawgrass strive to provide you with the tools to make the sublimation process easy to learn and simple to master. We hope you will find that the tools we have developed will make your years in the sublimation business fun and profitable. Please feel free to contact us with your feedback about our products. For additional information on our other products, visit our web site at www.sublimation.com.

Thank you and enjoy your SubliJet IQ™ printing system.

About this Document

This document contains descriptions and procedures for using SubliJet IQ inks, along with additional information for getting the best results from your transfers.

The documentation provided pertains only to the use of SubliJet IQ™ inks in your EPSON Stylus C88 ink jet printer. To assist you in the overall setup process, references are made back to the *EPSON Stylus C88 Printer Basics Guide* for instructions.

To help point out important information, specific instructions, and helpful tips look for the following symbols:

Indicates **Must-Do** items, including warnings and important guidelines. These must be followed to prevent damage to your printer.

Indicates useful tips for printing and sublimation.

Before you Begin

It is crucial that the OEM ink supplied with your printer is installed before you attempt to install your SubliJet IQ™ inks. This allows for two things: First, it primes the ink delivery system, ensuring that the SubliJet IQ™ ink will load more easily. Second, it familiarizes you with the basic operation of your printer. Please see the *EPSON Stylus C88 Printer User's Guide* for instructions on installation.

Quick Connect II™ Set-up for the C88

For more detailed instructions please refer to the Video Installation Guide on your PowerDriver™ CD

1. Check to ensure that you have all of the components necessary to setup your Quick Connect II™ system.

Components

1. Ink Cartridge + tubes
2. 1 x Long Tube Grip
3. 1 x Short Tube Grip
4. 4 x Ink Bags
5. Small primer bottle
6. Ink Box
7. Chips
8. Foam Block
9. Power Driver CD (Not Shown)
10. Printer

2. Place the Quick Connect II box on a level surface next to where your printer is going to be placed. It should be on the left hand side of your printer with the clamps facing towards the front.

***Your ink bags should <u>never</u> be elevated above the print head. Keeping the bags beside the printer at the same level assures the ink delivery system will operate properly*.**

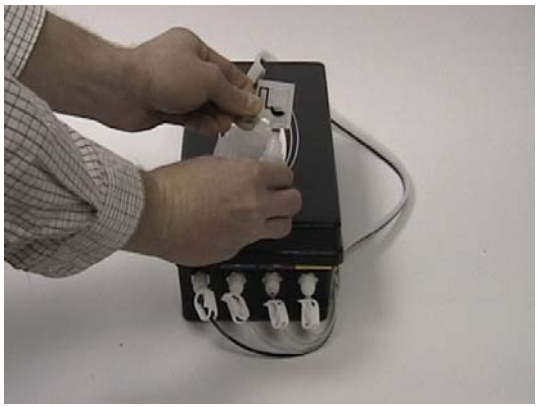
3. Remove the lid from the box and place it to the side.

4. Clamp the tubes at the end of each line before you clip on each bag to prevent ink from entering them. Insert the ink bags into the ink box by clipping them into the connectors inside each chamber. All chambers are labeled with the corresponding color for each ink bag.

Remember to match the right color ink to its corresponding cartridge chamber. Once the tube is filled, there is no way to undo it!

5. Once all ink bags are connected inside your Quick Connect II™ ink box, you will need to obtain the small primer bottle to prime each line.

6. Take the cartridge in one hand and the priming bottle in the other. Squeeze the priming bottle to release all of the air and insert it into the bottom of the cartridge to pull ink through the line until a small amount of it reaches the reservoir.



7. Once ink is in the reservoir, pinch together the clamp that's connected to the tube on the outside of the box. This will ensure that no more ink will pull into the reservoir until you are ready for it.

8. Repeat Steps 6 & 7 for each cartridge.

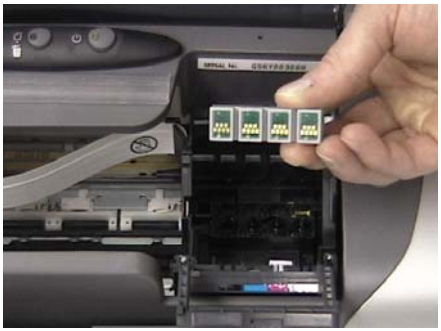
9. Place the lid back onto the Quick Connect II™ ink box and gently place the cartridges on top of the box while you are completing the printer setup.

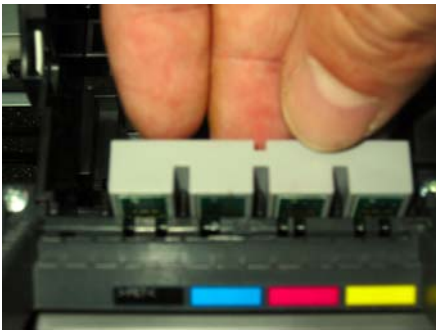
Printer Set-up for the C88

1. Turn the printer on, lift the lid, and press the ink button ♦.

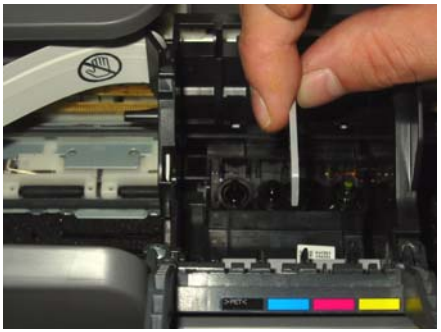
2. The cartridge bay will shift into the remove position. Lift the bay lid and remove any installed cartridges.

3. Install the cartridge chips into the slot on the front of the cartridge bay. ***Note: The chip has an up arrow on the back of it showing which way it should go in the printer.***





4. Insert the plastic cross bar into place by sliding the notched end into the back of the chip holders as shown.



5. Gently slide the cartridges through the hole in the cartridge cover. Start with the black cartridge on the left and attach the cartridges in this order:

(from left to right) Black, Cyan, Magenta, and Yellow

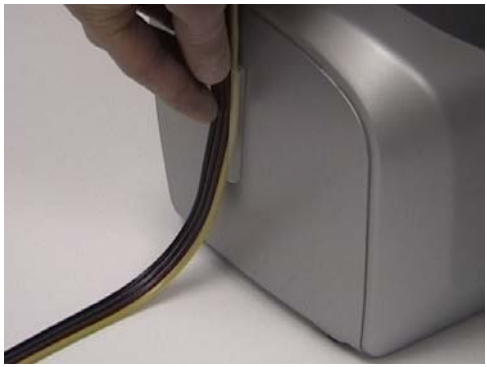
6. Obtain the foam block, place it on top of the cartridges, and close the cartridge cover. Be careful not to pinch the tubes when closing the cover.

7. Obtain the long tube holder and remove the tabs from the back exposing the adhesive. Place the tube holder in the flat gray area just beneath the buttons on the printer.

8. Slide tubing into the holder for placement.

9. Position the tubing so that the black line on it lines up with the edge of the tube holder.
Note: This will leave enough slack so that the cartridge bay can easily slide from one side of the printer to the other without creating tension on the tubes.

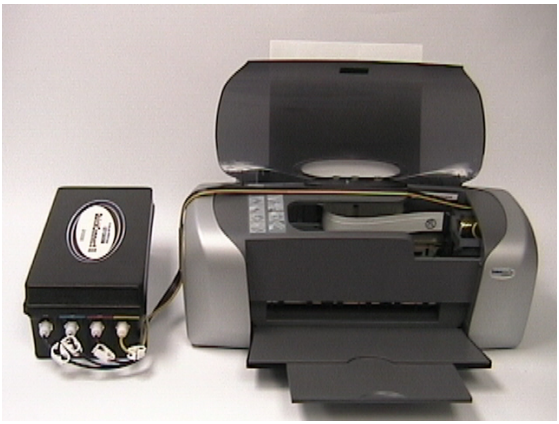
10. Obtain the short tube holder and remove the tabs from the back exposing the adhesive. Attach it to the left hand side of the printer where the tubes hang down to meet the Quick Connect II™ ink box. Slide tubes into the holder for placement.



11. Unclamp the end of each tube so that you are ready for printing.

10. Press the ink button to move the print head back to the ink cartridge parked position.

Congratulations! You've successfully installed a C88 Quick Connect II ink system and printer.



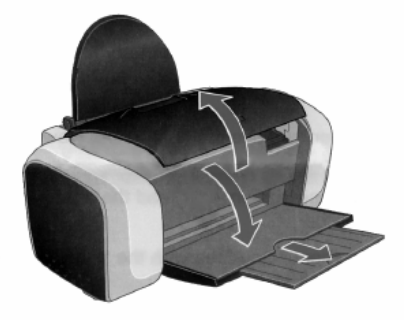
Tips:

- Make sure you install Power Driver from the CD that came with your Quick Connect II system. Refer to the Power Driver documentation and video tutorial on how to use Power Driver.
- Perform a nozzle check from Power Driver. A few cleanings may be necessary to get a good nozzle check.
- You may want to remove the printer lid or leave it open at all times.
- You may have a little air in your lines but this will clear after a few prints.
- If you are going to leave your system without using it for several days you should clamp your lines with the tube clamps.
- Do not raise the ink box higher than the printer

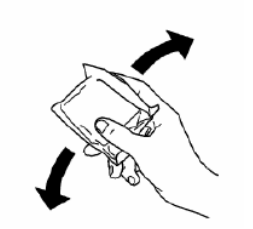
Installing SubliJet IQ™ Cartridges

1. Ensure the printer power is on and that the green light is not blinking.

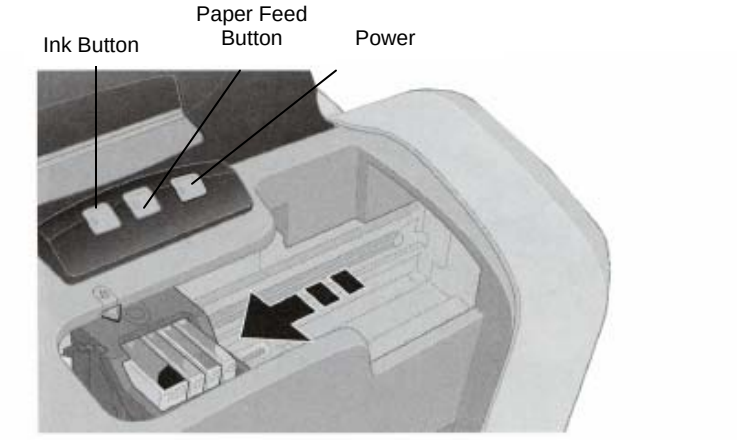
2. Open the printer cover and lower the output tray.



3. Shake each cartridge 4 to 5 times and remove it from its packaging.

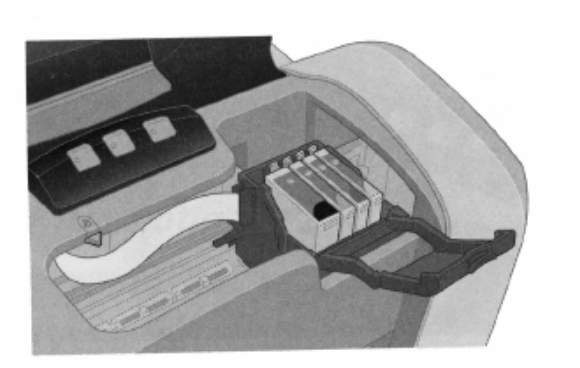


4. Press the Ink Button for one second to move the cartridge holder into the change cartridge position.

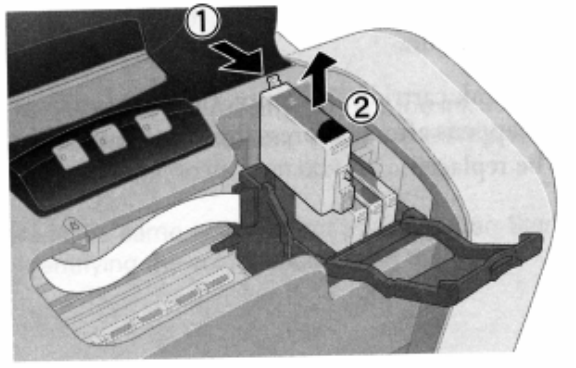


Do not hold the Ink Button for more than 2 seconds or the printer will clean the print head.

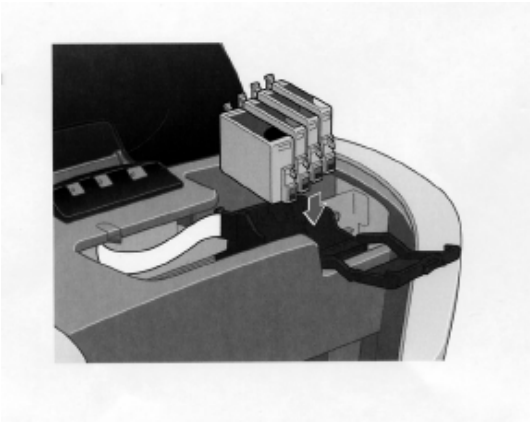
5. Open the cartridge cover.



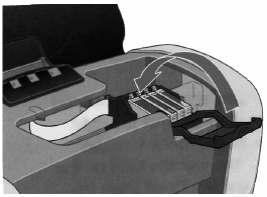
6. Squeeze the tab at the back of the Epson cartridge as you lift it out of the printer. Remove all Epson cartridges from the cartridge holder.



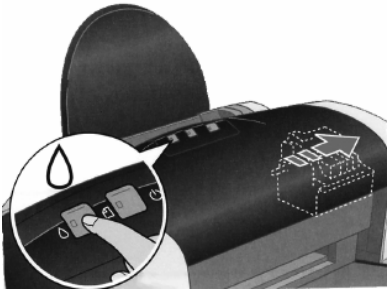
7. Insert the SubliJet IQ cartridges into the cartridge holder, ensuring they are firmly seated.



8. When the SubliJet IQ cartridges are in place, close the cartridge cover.



9. Close the printer cover and press the ink button for one second. The printer will move the print head to the parked position and charge the ink delivery system with the SubliJet IQ inks.

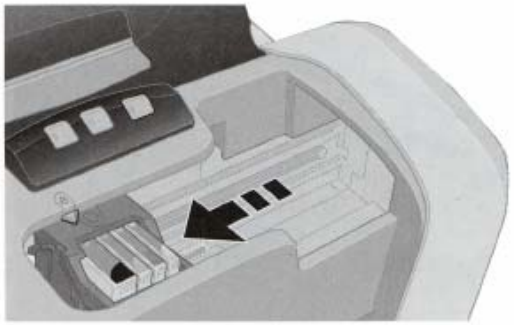


Replacing an Empty Cartridge

When a cartridge is low on ink the Ink Button on the printer will blink. If the cartridge is empty, the light will become solid. Both are indications of a cartridge change.

To change a cartridge when the ink light is blinking or solid:

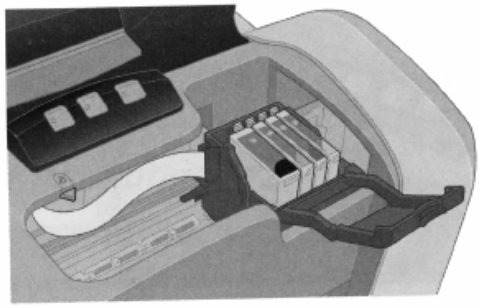
1. Determine which cartridge needs to be changed by pressing the Ink button for 1 second. The ink carriage will move to the far left in the machine and will stop beneath the mark on the printer.



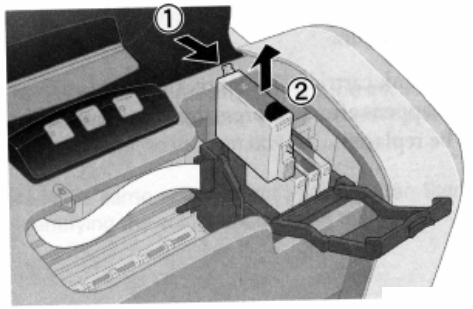
2. Press the ink button again.

- If more than one ink cartridge is empty, the next cartridge will move beneath the mark on the printer.
- Press the ink button until all empty cartridges have been confirmed and the cartridge holder moves into the change cartridge position.

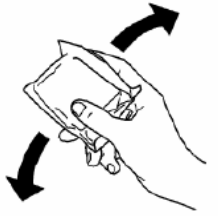
3. Open the cartridge cover.



4. Squeeze the tab at the back of the empty cartridge as you lift if from the printer.

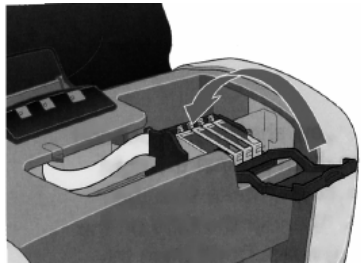


5. Shake the new cartridge several times and then remove it from its packaging.

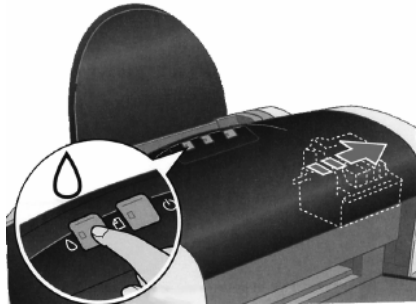


6. Insert the new cartridge into the cartridge holder, ensuring that it is firmly seated. Repeat steps 4-6 for each empty cartridge.

7. Close the cartridge cover.



8. Close the printer cover and press the ink button for one second to return the cartridges to their parked position and to charge the ink delivery system with the new ink.



Selecting Paper

For information on selecting the appropriate paper to use with your SubliJet IQ™ inks, please check our website at http://www.sublimation.com/support/ or call your authorized SubliJet reseller. While the use of copy paper or other inkjet paper will not harm your printer, the transferred results may be light, splotchy, or uneven. Some papers may even stick to the surface or leave a visible residue.

Heat Transfer Instructions

Because you can print on a variety of surfaces, you need to take all variables of the surface into account when selecting time, temperature, and pressure. Some of the variables are:

- thickness of surface,
- how fast the surface absorbs heat,
- coatings used on the material to create a receptive surface for sublimation inks (ceramics, metals, etc.),
- accuracy of heat press (time, temperature, and pressure).

The information listed below are only guidelines. Due to the differences in heat presses and the various materials you will be printing on, it is not possible to give absolute figures. You should check with your supplier for specific heat transfer instructions or experiment to find your own preferred settings.

SURFACE	TRANSFER TIME SUBLIJET	TRANSFER TIME SUBLIJET IQ	TEMP	PRESSURE	REMARKS
CERAMIC	150-210 seconds	150-210 seconds	350-400ºF	40 psi	Time varies with press, use green tile mat for ceramic tile
FR PLASTIC	33 seconds	75-80 seconds	400ºF	40 psi	Remove Plastic
METAL (Other) White, Silver, Gold	40 seconds	60 seconds	375ºF - 400ºF	40 psi	Time varies with metal manufacturer *(Contact your reseller for correct time and temperature)* Place absorbent sheet on bottom plate of heat press. Then place transfer paper face up on top of the absorbent. Next place the substrate face down on top of the transfer paper. *Remove paper from substrate immediately after transferring for best results.*
METAL (Universal Woods)	40 seconds	60 seconds	400ºF	40 psi	Use absorbent, remove plastic
MOUSEPADS	25 seconds	45 seconds	400ºF	40 psi	
POLYESTER FABRIC & PERFORMANCE APPAREL	25 seconds	45 seconds	400ºF	40 psi	
SOFT L'INK™	25 seconds	35 seconds	400ºF	40 psi	Press for 5 secs to eliminate moisture, use Teflon sheet between sides of shirt to prevent "blow through"
TEC FILM	210 seconds	210 seconds	350ºF	40 psi	
UNISUB™ PRODUCTS	75 seconds	75-85 seconds	400ºF	40 psi	Remove Plastic

User Guide

For Epson Stylus® C88

For distribution with SubliJet IQ® only

NOT FOR RESALE

Rev 8.0.0

PowerDriver Introduction

Obtaining the benefits of PowerDriver color management is now incredibly easy - simply print from your application with PowerDriver IQ® rather than the Epson printer driver. PowerDriver IQ prints your image just like the Epson printer driver except for the colors. Watch how it magically makes SubliJet colors picture perfect!

PowerDriver IQ delivers both convenience and the highest quality SubliJet color management technology. The innovation demonstrated by PowerDriver IQ is the result of our dedication to you, our customers. At Sawgrass Technologies, we are focused on delivering the highest quality digital transfer technology available. We fully expect that you will be "wowed" by the results you obtain with SubliJet and PowerDriver IQ.

PowerDriver IQ runs under Windows 2000/XP.

System Requirements

Minimum Hardware:
Pentium 4 – 2.0GHz or Athlon XP 2000+ Processor
512 MB System Memory

Recommended Hardware:
Pentium 4 – 3.0GHz or Athlon XP 2500+ Processor
1 GB System Memory

Setup Instructions – Windows 2000 and XP

Product Overview

PowerDriver IQ is color management software that has been written as a Windows printer driver. It is designed to work with Epson ink-jet printers and Sawgrass sublimation ink. The installation program will install Sawgrass color management software, the Sawgrass PowerDriver IQ printer driver software, and ColorSure tools and utilities.

Quick Start

1. Unpack and setup printer as described in the Epson manual.

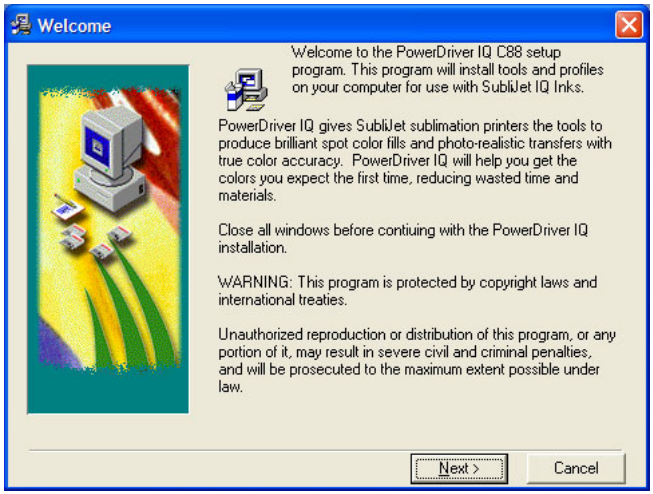
2. Install the Epson printer driver and verify printer operation.
3. Insert the PowerDriver IQ CD into the CDROM drive on the computer and install PowerDriver IQ.

Step By Step Installation

To get started printing as soon as possible, these are the steps Sawgrass recommends you perform while setting up your sublimation printer driver software.

1. Setup the printer according to the Epson instructions.
2. Install Epson OEM inks.
3. Install the Epson printer driver. According to the Epson user's manual.
4. After the Epson driver is installed, check to see which port the printer is set to:
   a. In XP you can do this by clicking on Start, Printers and Faxes. For XP with the Classic menu enabled or Windows 2000, click Start, Settings, Printers.
   b. Right click on the Epson printer you just installed and click on the Properties option.
   c. Select the Ports tab and *write down the port the printer is assigned to*. You will use this later in the PowerDriver IQ software installation.
5. Insert the PowerDriver IQ CD into your CDROM drive. The installation program should run automatically. (If the program does not automatically run, click Start, Run. Browse to your CDROM drive and click on Setup).

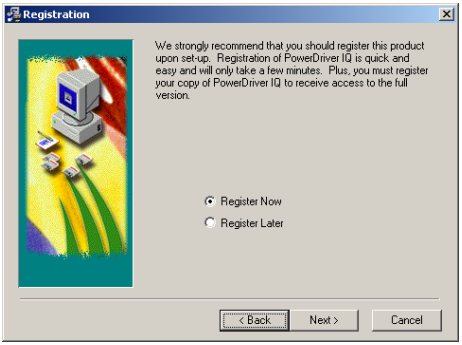
6. The Welcome screen is displayed. Click Next to proceed.


Welcome
Welcome to the PowerDriver IQ C88 setup program. This program will install tools and profiles on your computer for use with SubliJet IQ Inks.
PowerDriver IQ gives SubliJet sublimation printers the tools to produce brilliant spot color fills and photo-realistic transfers with true color accuracy. PowerDriver IQ will help you get the colors you expect the first time, reducing wasted time and materials.
Close all windows before contiuing with the PowerDriver IQ installation.
WARNING: This program is protected by copyright laws and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next >
Cancel

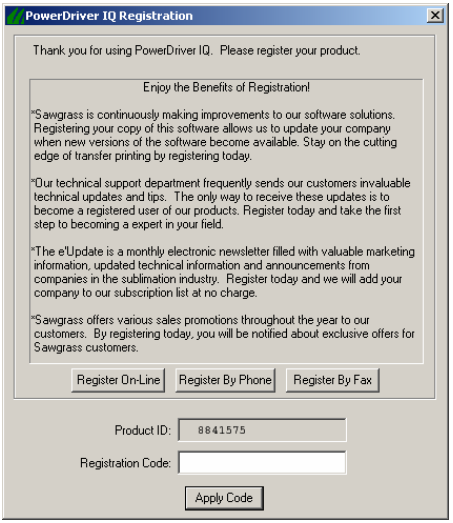
7. The License Agreement is displayed next. Select the appropriate choice for acceptance of the Licensing Agreement to continue.

License Agreement
1) PLA Text
END-USER LICENSE AGREEMENT FOR SAWGRASS SOFTWARE - PowerDriver IQ(TM)
IMPORTANT-READ CAREFULLY: This Sawgrass Technologies, Inc. End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and Sawgrass Technologies, Inc for the Sawgrass software product identified above, which includes computer software and may include associated media, printed materials, and "online" or electronic documentation ("SOFTWARE PRODUCT"). By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this EULA, do not install or use the SOFTWARE PRODUCT.
Reject License Agreement
Accept License Agreement
< Back
Next >
Cancel

8. If you have not previously registered PowerDriver IQ, you will be prompted to do so. Registering is the only way to take full advantage of the features in PowerDriver IQ. If you choose to register later, select Register Later and click Next to proceed with the installation.


Registration
We strongly recommend that you should register this product upon set-up. Registration of PowerDriver IQ is quick and easy and will only take a few minutes. Plus, you must register your copy of PowerDriver IQ to receive access to the full version.
Register Now
Register Later
< Back
Next >
Cancel

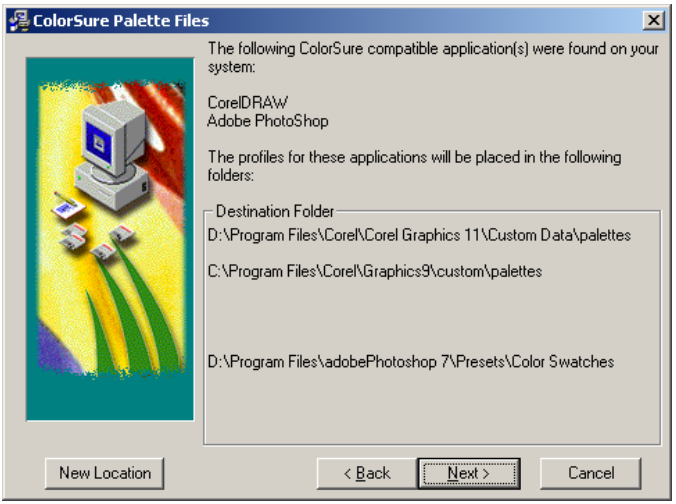
9. If you choose to register now, the registration screen will be displayed. To obtain your registration code you may do so in one of the following ways: Register on-line and receive your registration code via e-mail. Call Sawgrass Technologies, Inc. directly (843) 884-1575 and obtain your code over the phone. Send a fax and receive your registration code by fax.


PowerDriver IQ Registration
Thank you for using PowerDriver IQ. Please register your product.
Enjoy the Benefits of Registration!
*Sawgrass is continuously making improvements to our software solutions. Registering your copy of this software allows us to update your company when new versions of the software become available. Stay on the cutting edge of transfer printing by registering today.
*Our technical support department frequently sends our customers invaluable technical updates and tips. The only way to receive these updates is to become a registered user of our products. Register today and take the first step to becoming a expert in your field.
*The e'Update is a monthly electronic newsletter filled with valuable marketing information, updated technical information and announcements from companies in the sublimation industry. Register today and we will add your company to our subscription list at no charge.
*Sawgrass offers various sales promotions throughout the year to our customers. By registering today, you will be notified about exclusive offers for Sawgrass customers.
Register On-Line
Register By Phone
Register By Fax
Product ID:
8841575
Registration Code:
Apply Code

To register, you will use your Product ID (displayed on the registration screen) to obtain a Registration code. You will need separate registration

code for every machine on which PowerDriver IQ is installed. Enter your registration code and click the Apply Code button.

10. Sawgrass Technologies, Inc. provides ColorSure color palettes for use with Corel and Adobe. (Check the ColorSure section of the manual for information on how to use ColorSure to get perfect spot colors). If Setup detects either of these applications on your system, the palette files will be placed in the appropriate folder indicated in the Destination Folder box. Click Next to proceed with the installation.


ColorSure Palette Files
The following ColorSure compatible application(s) were found on your system:
CorelDRAW
Adobe PhotoShop
The profiles for these applications will be placed in the following folders:
Destination Folder
D:\Program Files\Corel\Corel Graphics 11\Custom Data\palettes
C:\Program Files\Corel\Graphics9\custom\palettes
D:\Program Files\adobePhotoshop 7\Presets\Color Swatches
New Location
< Back
Next >
Cancel

11. The PowerDriver IQ installation program will attempt to use plug-n-play to determine the port that the printer is connected to, click Next to continue. *Note: Cancel any 'Found New Hardware' wizards that may start during this process, do NOT cancel any file copy process however.*

PowerDriver IQ C88
The PowerDriver IQ C88 printer driver will be installed next. If prompted for a Digital Signature, please click YES to continue loading the necessary PowerDriver IQ C88 printer driver files.
Verify that the printer is currently powered on and connected to the computer with a communications cable. Then click Next.
Next >
Cancel

12. If the installation cannot find the printer port then you will be given the opportunity to choose the port you want to use for the product you are installing. Use the value that was recorded in step 4 above.

13. Once the installation has completed, the Installation Complete screen will display. Click OK to end the installation.

Using PowerDriver IQ™ in Windows 2000 / XP

PowerDriver IQ™ is simple to use. Whenever you have SubliJet inks in your printer, you should print using PowerDriver IQ™. **Do not** print to your Epson printer with the Epson printer driver; printing with the Epson driver will not give you the benefit of color management.

Quick Start Example (Corel Draw)

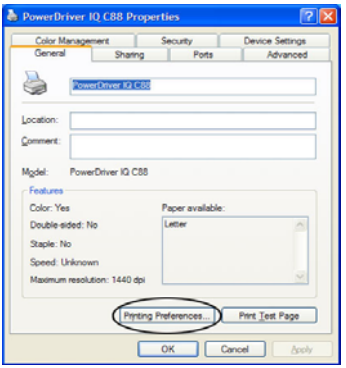
1) Open/Create an image in Corel Draw.
2) Select print from the File menu.
3) Select the PowerDriver IQ printer.
4) Use the properties button to access and set the Color, Output, Ink and Substrate, Resolution, and Advanced options.
5) Click Print.

Setting PowerDriver IQ™ printer properties

To configure PowerDriver IQ™ for the correct substrate, you must display its printer properties. There are two ways to display the printer properties:

From the Windows Desktop:

1. Click on Start> Settings> Printers.
2. Right-click on your PowerDriver IQ printer.
3. Select *Properties* from the pop-up menu.
4. Select the *Printing Preferences* button.



From an Application:

1. Select File, Print Setup.
2. Choose the PowerDriver IQ printer from the list of printers.
3. Click the Properties button.

PowerDriver IQ™ Properties Overview

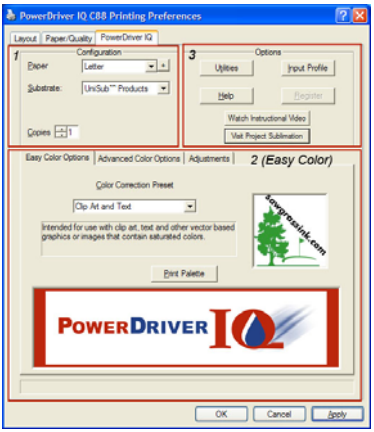
The following figure shows the printer properties for a registered version of PowerDriver IQ™. The Advanced Color Options tab and the Print Palette functions will not be available if the product has not been registered.

There are three main property groups;

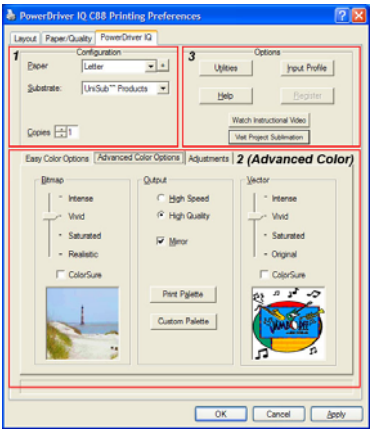
Configuration – Set Paper, Transfer Substrate, and Copy Count

Color Settings – Color management control options. (The Color Options group comes in two modes; Easy and Advanced) Both are described below.

Options – Utilities for printer maintenance, online help, product registration, and setting input profiles



Easy Color Property Page



Advanced Color Property Page

Group 1 – Configuration

Paper Size – From the drop down list, select the paper size you wish to use. To add custom paper sizes click the + button to the right of the paper size drop down list. *Note: After adding a custom paper size, the printing preferences dialog must be closed and re-opened before the new paper size will show in the paper size drop down list.*

Substrate – From the drop down list, select the type of material to which you will be transferring your printed image. It is important to choose the correct substrate. PowerDriver IQ's color management is optimized for each different substrate.

Copies – Sets the copy count for the number of prints to be made.

Group 2 - Color Settings (Easy Color Mode)

The Easy Color Option tab provides you with access to a collection of carefully selected color management presets. The right color management choice is essential to making high quality transfers. Easy Color is a fast, simple way of choosing a color management scheme. You choose an Easy Color setting based on the composition of the original image. The chart below lists some guidelines for when to choose different Easy Color settings. Choosing a setting and clicking the apply button automatically sets the bitmap, vector, and output settings found on the advanced tab.

Color Correction Preset – Sets the color correction, the mirror, and the print quality options. The table below describes each Easy Color setting.

Easy Color Icon	Easy Color Description
	Photo – Realistic When to select: If your source image is a photograph, or a photographic scene. Color Management Goal: Realistic color reproduction. The goal is to reproduce the transferred image with color that is as close as possible to the input image.
	Clip Art and Text When to select: If your source image is clip art, text, or a mixture of the two Color Management Goal: The goal is to generate colors that are vivid & contrast well with each other. The overall emphasis is to keep the transferred colors close to the input colors but still add a little extra "pop" to the colors.
	Art Logo When to select: If your source image is clip art, text, or a mixture of the two & you want to increase the intensity of the colors. Color Management Goal: The goal is to generate colors that are vivid & contrast well with each. Unlike the "Clip Art and Text" setting, Art Logo emphasizes vivid output at the expense of color accuracy.
	ColorSure™ Spot Colors When to select: For all image types (bitmaps, scans, clipart, text, etc...) that were designed using the ColorSure palette. (See appendix C for details on using ColorSure to design your artwork). Color Management Goal: Generate consistent output that reproduces colors based on the ColorSure palette.
	ColorSure™ Photos When to select: When you have a mix of bitmap & vector (text, clipart, or shapes) and only the vector elements were designed using the ColorSure palette. Color Management Goal: Generate output that reproduces photographic data using the Photo - Realistic setting and uses ColorSure™ Spot Colors for the vector components of the artwork.

Print Palette Button – Prints the ColorSure palette for the selected substrate. ColorSure is a method for reproducing exact spot colors. The two main components are; 1) the transferred palette and 2) the CorelDraw, Corel PhotoPaint, and Adobe swatches. For a complete description on how to use ColorSure to get perfect spot colors, see appendix C.

Group 2 - Color Settings (Advanced Mode)

Overview

This tab gives you access to all of the color management controls available in PowerDriver IQ™. Color correction allows you to create transfers from all kinds of images, from photorealistic images to spot color logos. For maximum flexibility, PowerDriver IQ™ lets you color correct bitmap and vector elements differently, even if they are in the same graphics file. For example, if you scan a photograph and import it into CorelDraw, PowerDriver IQ™ will use the color management settings that have been selected for Bitmap. If you then add text on top of the bitmap image, PowerDriver IQ™ will use the color management settings that have been selected for Vector. The photograph and the text will be color corrected differently! Why? You can now sublimate images with realistic photographic backgrounds that have vivid spot color text.

Vector and Bitmap Explanation

Bitmaps are a grid of pixels. Bitmaps come from digital cameras, scanners, and photo cds. Bitmaps can also be created in applications like Corel PhotoPaint or Adobe PhotoShop. Bitmaps have file extensions like GIF, JPG, BMP, and TIF. Vector components consist of shapes, curves, lines, and text. They are created in programs such as CorelDraw and Adobe Illustrator. Higher end programs like CorelDraw can combine Vector and Bitmaps into a single image. As a rule of thumb, if the object in your image is made of curves, text, shapes, or fills, it will be color corrected using the PowerDriver IQ™ Vector settings. All other image types will be color corrected based on the PowerDriver IQ™ Bitmap setting.

Color Correction Settings

Realistic (Bitmap ONLY) - This setting is most suitable for reproducing skin tones in scanned photographs.

Original (Vector ONLY) - This setting is most suitable for reproducing life-like clipart.

Saturated - The Saturated setting will make the colors in your image more intense. Saturated output tries to remain color accurate with a slight bump in intensity.

Vivid – This setting is most suitable for images where it is important that the colors are vivid and contrast well with each other. Artwork, graphics, logos, and text, as well as photographs of landscapes or still life are good candidates for the Vivid setting. This can be set for either Bitmap or Vector images.

Intense – This kicks the color intensity and saturation to the extreme. This setting does not try to keep color accurate, it's main goal is to produce deep dark colors. Artwork, graphics, logos, and text are good candidates for this setting. Some photographs will look good but typically, this setting is too intense to be used with photographs. This can be set for either Bitmap or Vector images.

ColorSure Enhancement - The ColorSure enhancement is used to replace specific colors in your image with a spot color chosen from the ColorSure palette. This resulting spot color enhancement is not affected by color setting. A ColorSure spot color will ALWAYS print the same. See Appendix C for an overview of ColorSure.

Print Palette Button – Prints the ColorSure palette for the selected substrate. ColorSure is a method for reproducing exact spot colors. The two main components are; 1) the transferred palette and 2) the CorelDraw, Corel PhotoPaint, and Adobe swatches. For a complete description on how to use ColorSure to get perfect spot colors, see appendix C.

Custom Palette Button – The Custom Palette utility enables you to add, edit, import and export custom colors to the ColorSure palette. If you need to precisely match a specific color, the Color Finder tool makes this a breeze. For a complete description on how to use the Custom Palette, refer to Appendix C.

Mirror – When you transfer an image, the result will be "flipped" when compared to the printed image. In order for your transfers to come out correctly, you must flip the image before transferring. Select this option to do the flipping for you. If you are doing this yourself in your editing application, make sure this option is turned off.

High Speed – If the printer supports multiple resolutions, choose the most appropriate setting. For soft substrates, the High Speed option works well.

High Quality – If the printer supports multiple resolutions, choose the most appropriate setting. For hard substrates, choose the High Quality option.

Group 3 – Printer Options

Utilities – Click this button to display a utilities screen. From the utilities screen you can print a nozzle check pattern, run a print head cleaning cycle, align the printer's print head, spool a PowerDriver IQ™ print file to the printer, and print a page of primary ink colors.

QC Utilities – Click this button to display a Quick Connect utilities screen. From the QC utilities screen you can print a nozzle check pattern, run a print head cleaning cycle, and prime a Sawgrass Quick Connect System.

Help – This will display a help dialog box for an easy overview of the PowerDriver IQ driver functions and settings. It also contains a link to the Sawgrass Technologies website.

Register – If the PowerDriver IQ product has not been registered, click this button for instructions on how to register the product and unlock all the features.

Input Profile – This option allows you to specify an input profile that the driver will use when color correcting your image. If you are printing scanned artwork and your scanner manufacturer provided ICC profiles for your scanner model, select the profile here In order to select a profile IT MUST BE INSTALLED ON YOUR MACHINE. To install a profile on your machine, locate the profile on your machine using Windows Explorer. (PowerDriver IQ supports both ICC and ICM profile types). Right click on the profile file name and select "Install".

Appendix A: Network Printing in Windows 2000, XP

Network printing with PowerDriver IQ™ in Windows 2000 and Windows XP is simple. Before a network printer can be used it must be installed on the network and shared.

Host Machine (Server)

The server machine must have installed the printer and have the printer shared. To install the networked printer, run Start | Setting | Printer | Add Printer. The Wizard will guide you through setting up the printer. When prompted, choose “Network Printer” and browse to the server machine to locate PowerDriver IQ™.

Appendix B: Defeating Application Color Management

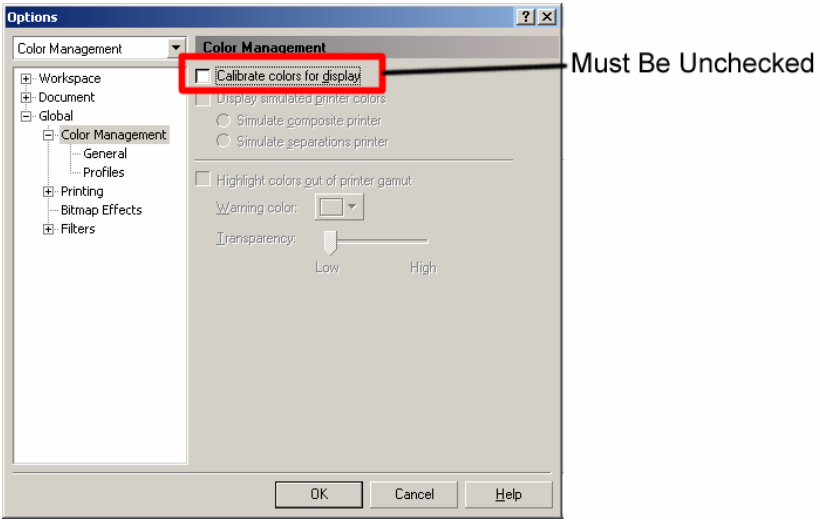
PowerDriver IQ™ provides a complete color management solution for your SubliJet printing. ***It is extremely important that you turn off any color matching features associated with your design software.*** An explanation of how to disable print-time color management in several popular design packages follows:

CorelDraw™ version 9

1. Create a new graphic.

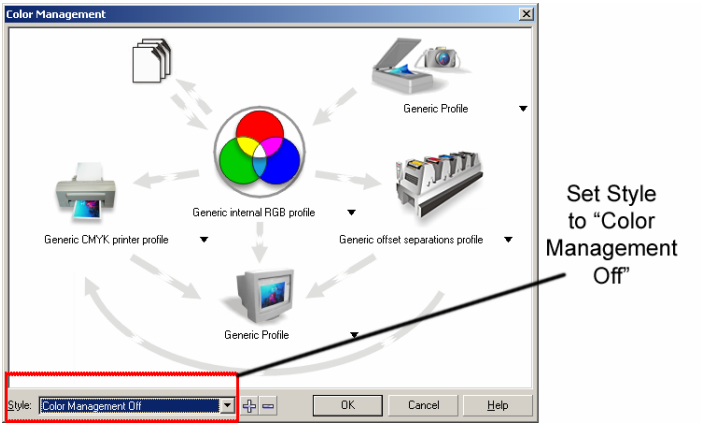
2. From the main menu choose Tools, Color Management. The Color Management dialog box is displayed.

3. In the Color Management window (see figure below), UNCHECK the Calibrate colors for display box.



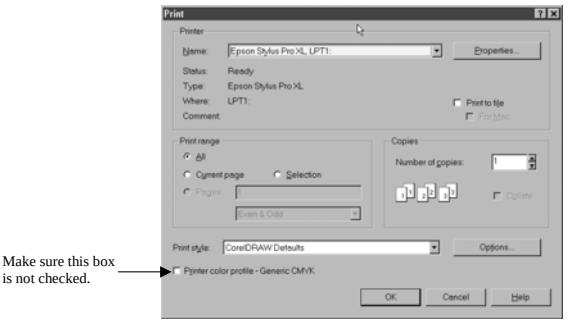
CorelDraw™ version 10, 11 and 12

1. Create a new graphic.
2. From the main menu choose Tools, Color Management. In the Color Management window (see figure below), set the Style option to Color Management Off.



CorelDraw ™ (version 5, 6, or 7)

If you are using **version 5, 6, or 7** of **CorelDRAW**, ensure that you have the P*rinter Color Profile* check box unchecked. This setting is found in the lower left of the Print dialog window. See figure below.



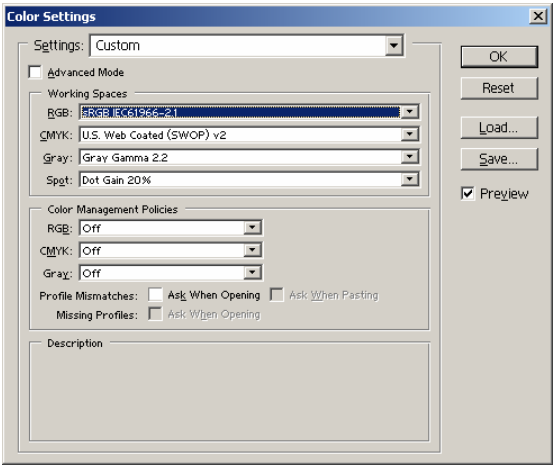
CorelDRAW 5, 6, and 7 print dialog

Adobe Photoshop™ 6

Color Setup

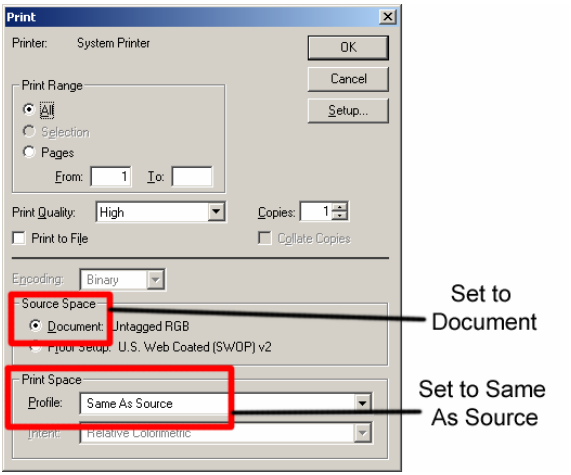
From the main menu choose Edit, Color Settings. On the Color Settings dialog box:

1. Set all Color Management Policies to Off
2. Uncheck Profile Mismatches
3. Uncheck Ask When Opening.



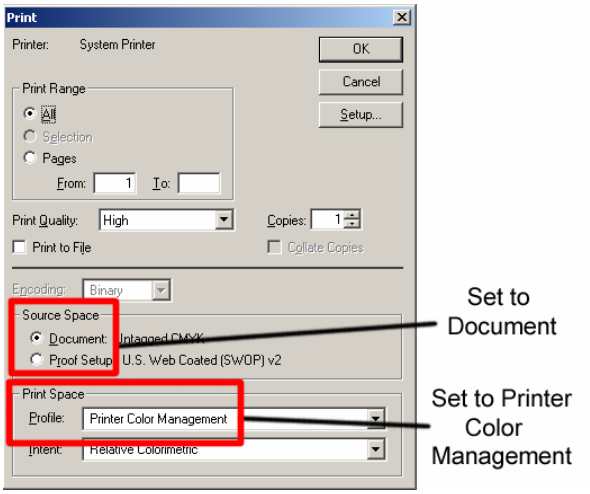
To Print RGB Graphics

Choose File, Print, and set the options as described below:



To Print CMYK Graphics

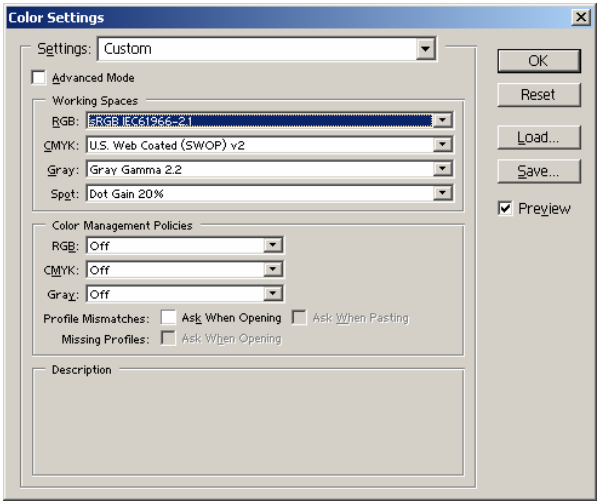
Choose File, Print, and set the options as described below:



Adobe Photoshop™ 7 and CS

Color Setup

From the main menu choose Edit, Color Settings. On the Color Settings dialog box, turn all Color Management Policies off. Turn off Profile Mismatches.



To Print:

Always select File, Print with Preview. On the print dialog page, set the options as described below:

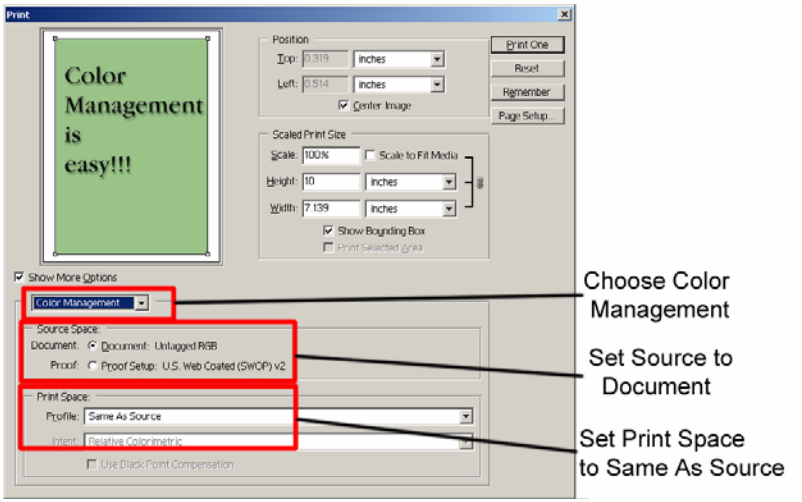
a. Check Show More Options

b. Choose Color Management

c. Choose Document as Source Space

d. Choose Same as Source for Print Space

From the Color Management drop option list, make sure that Source is set to “Document” and Print Space is set to “Same As Source”.



Appendix C: Using ColorSure™ and Custom Palette

I. Introduction

ColorSure is a method for reproducing exact spot colors. There are four main components of the ColorSure System: 1.) the transferred palette; 2.) Color Finder; 3.) Custom Palette; and 4.) the CorelDRAW and Adobe application palettes / swatches.

1. **ColorSure Palette**: This is your main color palette that includes an extensive selection of 190 commonly used colors.
2. **Color Finder**: If a color you need is not on the ColorSure palette, the Color Finder tool allows you to locate the exact custom color you are looking for.
3. **Custom Palette**: With the Custom Palette feature, you can add new custom colors to the existing ColorSure Palette mentioned in step 1.
4. **Application Palettes**: You can add your Color Finder colors to an existing application palette, or you can add multiple custom colors to new, custom palette files (*.cpl, *.acl, etc.).

II. Printing the ColorSure Palette

The first step you will want to take is to print and transfer your ColorSure palette to the various substrates you will be using. Most likely you will have customers who desire precise colors. Having your ColorSure palette available allows the customer to choose the color from the palette that is the closest match to what they want, and this gives you a starting point for finding the exact custom color that will match your customer's needs.

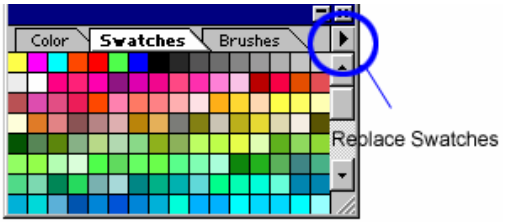
To print the ColorSure palette, follow the steps below:

- Click 'Start' and navigate to the 'Printers and Faxes' folder. Right-click on your PowerDriver printer and select 'Printing Preferences' from the menu. You may also open PowerDriver from within an Adobe or Corel program by going to File, Print, and choosing the PowerDriver printer from the pull-down menu. Click Properties to open PowerDriver.
- Choose the paper size you will be printing the palette to (Letter, Legal, etc)
- Choose the substrate that you will be transferring the palette to.
- Select the speed / resolution of the palette – High Speed or High Quality.
- Be sure to check the box to mirror your print, click 'Print Palette,' and then transfer the palette to the previously selected substrate.
- You now have a visual representation of how the ColorSure palette colors will appear on that particular substrate.

III. Designing Your Artwork

By picking colors from the ColorSure palette, you will be able to consistently reproduce colors in a reliable manner. To assist you in designing your artwork, PowerDriver installs three palettes: two for Adobe products and one for Corel products. These colors match the palette that is printed from within PowerDriver.

- To open the ColorSure Palette in Corel 10, 11, and 12, choose Window | Color Palettes | Open Palette. Select the file "ColorSure PDIQ V3.cpl"
- To open the ColorSure Palette in Corel 9, choose Window | Color Palette | Open Palette. Select the file "ColorSure PDIQ V3.cpl"
- To open the ColorSure Palette in Illustrator, choose Window | Swatch Libraries | Other Library. Navigate to where it was installed to when you installed PowerDriver: C:\Program Files\Sawgrass\PowerDriver\Adobe Illustrator and hit Open. *For easier access to the Palette file copy it from this [above] path to Illustrator10\Presets\Swatches and it will show up in your pull-down list directly under the Swatch Libraries menu. Other versions of Illustrator will have similar steps.*
- To open the ColorSure Palette in Adobe PhotoShop, choose the Swatches Palette, click the option arrow on the palette, choose *Replace Swatches* and pick the "ColorSure PDIQ V6.aco" file.



HINT

After you have the ColorSure palette loaded into CorelDraw, move the cursor over each color. As the cursor hovers over each different color, the ColorSure name is displayed in the status area at the bottom of the screen.

IV. Using Custom Palette

The Custom Palette Utility is a useful tool that was developed to assist you in editing, importing and exporting custom colors and color palettes. Please read the following short set of instructions to learn how to use this simple, yet valuable application.

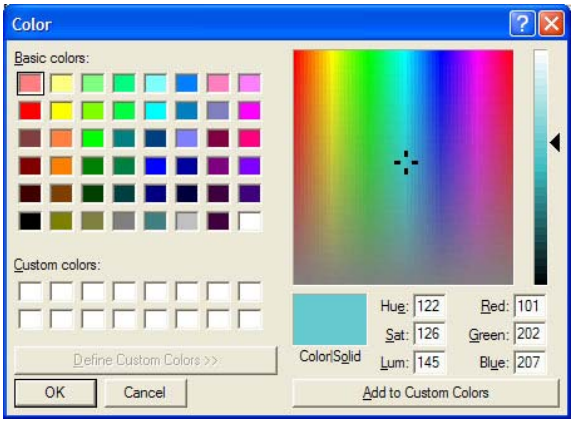
Using Color Finder

There will be times when the color you need is not included in the ColorSure Palette. The Custom Palette Utility was developed to provide a solution for this.

The Color Finder tool allows you to start with a specific color (e.g. navy blue) and find similar colors in the same family by adding and subtracting up to three colors called 'Step Colors'. For example, starting with navy blue with a CMYK value of 60,60,0,40 and choosing two step colors (e.g. cyan and magenta) would expand the original navy blue in four directions (more cyan, less cyan, more magenta, and less magenta). This expanded color chart – specific to a particular substrate and printing speed – is outputted directly to your printer.

How to use Color Finder:

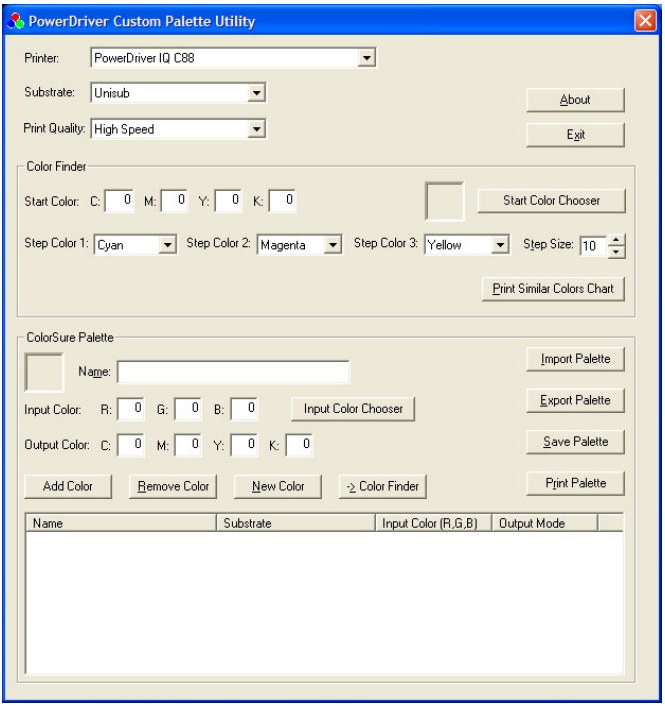
- At the top of the window you will select the printer, substrate, and print quality that you want to use.
- Next, you will choose your desired start color. You may either enter the CMYK values manually in each designated box, or click on the **Start Color Chooser** button. This will open a new window from which to visually choose your start color.



Start Color Chooser Tool

– Using **Start Color Chooser** allows you to quickly choose a color from the basic color selection on the left or from the numerous possibilities of the color matrix on the right. To define a custom color, click anywhere in the matrix. Use the slider at the right of the matrix to adjust luminosity. Clicking 'OK' will automatically fill the CMYK boxes with the corresponding values.

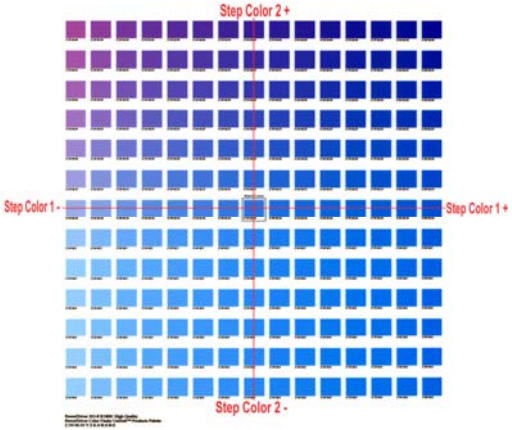
– For advanced users, CMYK values can be determined by printing out a Custom Palette, which is outlined in the next section.



Custom Palette Utility

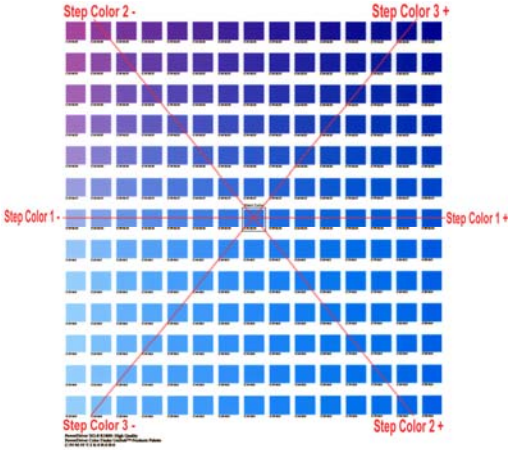
- You may alter the chosen color's CMYK value by selecting two or three **Step Colors**. Using multiple step colors will present you with a greater range and variety of colors to choose from.

– For instance, if you choose to modify your Start Color with two steps, then Step Color 1 will change its values on the X (horizontal) axis and Step Color 2 will change its values on the Y (vertical) axis.



Color Finder Palette with two Step Colors

– If you modify your Start Color with three steps, Step Color 1 will remain the same. However Step Color 2 and Step Color 3 will form an imaginary 'X' and their values will change on opposing diagonal Y axes.



Color Finder Palette with three Step Colors

- Next, determine what **Step Size** you want to apply to the Color Finder palette. This is simply a question of how much you want your Start Color to fluctuate. If your Start Color is close the color you are looking for, use a low Step Size (i.e. 5 or less). However, if your start color is not close to what you are looking for, use a higher Step Size. You can enter any Step Size value between 1 and 40.
  - As an example, let's say your Start Color is C:20, M:100, Y:150, K:0 and you select Cyan and Magenta to be your Step Colors. You also enter a Step Size of 10. When you click the 'Print Colors' button, your Start Color will be in the middle of the Color Finder palette and from there each color will vary the Cyan and Magenta values by 10.
- When you are finished selecting the Start Color, Step Colors, and the Step Size, click on the **Print Colors** button. This will print your custom Color Finder palette directly to your printer.
- After printing the Color Finder palette, transfer it to your selected substrate and then try to match your desired color to one that is on the palette. If you find a suitable match, you are finished using the Color Finder tool. Move on to the next section - **The Custom Palette**.
- If you couldn't find an accurate match on the first printed Color Finder palette, don't worry. Follow the easy steps below, and you can find a more suitable custom color.
  1. First, try to locate a new Start Color from the palette that is closer than the original color.
  2. Now write down that color's CMYK value. Here is how to obtain this value. There are numbers under each color that are dependant upon which Step Colors you chose. For example, it might say C:70 M:120. Take note of these values. Then, at the bottom left of the Color Finder palette you will see a full set of CMYK values. The new Start Color's CMYK value would be C:70, M:120 and whatever the YK values are from the full set.
  3. Lastly, plug the CMYK values for the new Start Color into the boxes in Color Finder, choose your Step Size, and click on Print Colors once again. Continue with steps 1-3 until you find your desired color.

The Custom Palette

Let us assume that you have found the exact color you need using the Color Finder tool. What you need to do next is apply these custom color values to either an existing palette, or to create a new custom palette altogether. This will allow you access to this color again should the same job arise.

How to use Custom Palette:

- First, you need to assign the CMYK values of the matched color from the Color Finder palette to the **Output Color** CMYK fields in the Custom Palette section.
- Give your new custom color a descriptive **Name** in its designated field (e.g. IBM Blue).
- Next, assign an RGB **Input Color** value. There are two methods to establish this value.
  1. If you have the original file, sample the color that was matched in your graphic design application with the eye dropper tool. This will give you the RGB value of that color. Input this value into the RGB Input Color fields of the Custom Palette section.
  2. If you do not have the original file, or the artwork has not yet been designed, simply click on the 'Input Color Chooser' button, and then click on "Define Custom Colors". From the color matrix, find a color that closely resembles the color that you are adding to the custom palette. At the bottom-right of the color matrix window are the RGB values. Simply click 'OK' and the RGB Input Color values will be automatically entered. Please take note of these RGB values for later use in your design applications.
- Click the **Add Color** button. A window will pop up asking you whether you want to add the color to the palette for all substrates, or just the current substrate. Click 'YES' here unless you have the same custom color saved on palettes for other substrates. Another window will then ask you if you want to save the custom color for all resolutions or just the current one. Click 'YES' here unless you have the same custom color saved on palettes for other resolutions.
- Lastly, click the **Save Palette** button. When finished, simply Exit out of the window.

***** *The 'Import Palette' and 'Export Palette' buttons are convenient to have in the event you need to transfer palettes to and from different computers.*

Adding Swatches to your Application Palette:
It is possible to add your custom color(s) swatch to an application palette as well. You will need to take note of the Input Color RGB value that you assigned in the previous step in order to create the new swatch. Refer to your specific design application software's manual for instructions on this.

Appendix D: Custom Paper Sizes

Adding Custom Paper Sizes
See the section titled “PowerDriver IQ Properties Overview” for a description of adding custom paper sizes using the printing preferences dialog. The minimum paper size for the C88 is 4”x6” and the maximum paper size is 8.5”x24”.

Deleting and Modifying Custom Paper Sizes

PowerDriver IQ uses standard Windows Print Server forms for paper size definitions. These forms can be added, deleted and maintained using the standard Windows print server properties configuration dialog.

To access the Print Server Properties dialog open the Printer and Faxes folder from the Windows control panel. Then select the **File -> Server Properties** menu item from the printer folder. The **Forms** property sheet can be used to delete and modify form properties.

Tips for Successful Sublimation

POLYESTER FABRIC

Maintain appropriate heat press times.

- Shortened pressing times will result in good surface color but the sublimation dyes will not completely penetrate the polyester fibers. This leaves the dyes more susceptible to wash out.
- Longer pressing times will cause the dye molecules to penetrate deeper into the fiber, creating a washed out look. For guidelines on transfer times, see the section entitled *Heat Transfer Instructions.*

Maintain appropriate heat press temperatures & pressure

- The correct temperature setting is vital for achieving desired results. Higher temperatures can damage the polyester fibers to the point that they cannot properly "hold" the dyes. For guidelines on transfer temperatures, see the section entitled *Heat Transfer Instructions.*
- Too much pressure on the heat press may cause the dyes to penetrate too deeply into the fabric causing a washed out look. For guidelines on transfer pressure see the section entitled *Heat Transfer Instructions.*

METAL

To obtain the best results when printing onto metal, place the transfer between the metal and an absorbent cloth or fresh, non-textured paper towel. This will absorb any dyes that pass back through the paper and any moisture released during the transfer process. If you have problems with inconsistently filled areas, this may alleviate the problem.

CERAMIC TILES & MUGS

When transferring onto ceramic tiles and mugs, immediately peel the paper off of the ceramic after removing it from the heat press. Once the paper has been removed, cool the ceramic by submerging it in cool water, or run water over it from a faucet. If paper residue remains on the surface of the ceramic, clean with citrus cleaner. If you experience a significant paper-sticking problem, call your SubliJet reseller for assistance.

Hanes Soft L'Ink® Shirts

- The presence of moisture in your fabric can lead to bleeding of the image. Remove moisture by pre-pressing your shirt for 10 seconds. Use Teflon sheets between the front and back of the shirt to prevent the inks from penetrating to the other side of the shirt. If dye residue from your heat press is being deposited on your shirts at any time, heat press a paper towel or similar absorbent material to remove it.

- Using a lint brush before pressing can greatly reduce lint or debris on the shirt.

MOISTURE & HUMIDITY PROBLEMS

The addition of moisture to the sublimation process can cause unwanted results. Under normal circumstances, the small amount of moisture that can accumulate in your paper is absorbed directly into the transfer substrate; however hard substrates like metal and ceramic are unable to absorb excess moisture. Some of problems that are attributed to moisture include: color shifting (colors lose accuracy), bleeding of the image, and uneven transfer of solid filled areas

To avoid these problems

- Keep your paper in a dry place.

- If you suspect moisture, set the paper on your press for a few seconds. Do not press it. Just expose it to the warmth. The heat radiating from the press should help evaporate most of the moisture.

- To eliminate moisture in fabric, press the fabric for 10 seconds before doing the heat transfer.

- Use an absorbent cloth or fresh, non-textured paper towel behind the transfer sheet to absorb the moisture.

Supplies & Equipment

Contact your reseller to purchase sublimation supplies and equipment. For more information, see the Sublimation Supplies Directory on our website at www.sublimation.com.

Operating Conditions

Certain environmental conditions should be taken into account for the operation of SubliJet IQ™ inks, including temperature and relative humidity.

- Supported Operating Conditions are 65° – 80° F with 40 – 60% relative humidity
- Optimum Operating Conditions are 68° – 75° F with 40 – 60% relative humidity

Storage

- Care should be taken to prevent storing SubliJet below freezing temperatures (32°F, 0°C). Do not expose SubliJet to extreme heat (temperatures in excess of 104°F, 40°C). If SubliJet has been in storage, you should allow it to reach room temperature before using it.
- Do not expose SubliJet cartridges directly to light, especially sunlight, for extended periods.
- For best results, install your SubliJet cartridges by the date on the cartridge. Please refer to the individual ink bag/cartridge for the specific ink expiration date.

Troubleshooting

The troubleshooting tips found in this section relate mainly to problems that can be seen in transferred SubliJet images. If you are having problems related to the performance of your printer, please refer to the *Problem Solving* section found in the *EPSON Stylus C88 Printer User's Guide*.

The colors in my transferred image are incorrect

- The image may need color adjustment. Use PowerDriver color matching software. For more information on how to use this software, please see the section entitled PowerDriver *User's Guide*.
- Ensure you used the right printer driver and driver settings. Please see the section entitled PowerDriver *User's Guide*.
- Ensure you pressed the item with the proper time, temperature, and pressure. For guidelines see the section entitled *Heat Transfer Instructions.*
- Verify all colors print correctly. Run the Nozzle Check utility and clean the print heads as required.

My printout is really light on paper

SubliJet IQ ink naturally looks muted before the heat transferring of the image. After transferring is complete, SubliJet's unique inks will produce a brilliant and durable final product.

My printout gets cut off on the bottom or side

- Verify the printer driver is setup for the correct paper size. Your printer driver setting needs to match the paper size that is loaded in your printer.
- Ensure the right paper guide is in the proper position. When setting up the printer, slide the right paper guide to the left until it clicks into position.

My image looks good but it washes out

- Ensure you pressed the garment with the proper time, temperature, and pressure. If so, try pressing longer to ensure that the dyes are penetrating the fibers sufficiently. For guidelines, see the section entitled *Heat Transfer Instructions.*
- Ensure you used a recommended paper. See the section entitled *Selecting Paper*.
- Ensure your substrate is designed to accept sublimation transfers. Garments made from natural fibers, such as cotton, are not compatible with the sublimation process.

Colors are light and splotchy

- Ensure you printed on the correct side of the paper. The print side is the bright white side of the paper.
- Ensure you used a recommended paper. For more information, see the section entitled *Selecting Paper*.
- Ensure you pressed the item with the proper time, temperature, and pressure. For guidelines, see the section entitled *Heat Transfer Instructions.*
- Verify your printer driver settings are correct. Please see the section entitled PowerDriver *User's Guide* for additional information.
- Ensure you do not have a moisture problem. For more information, see the section entitled *Moisture and Humidity* on the *Tips for successful Sublimation* page.
- Ensure your substrate is designed to accept a sublimation transfer. Garments made from natural fibers such as Cotton are not compatible with the sublimation process.

My image looks blurred

- Ensure you pressed the item with the proper time, temperature, and pressure. For guidelines, see the section entitled *Heat Transfer Instructions.*

- Ensure you used a recommended paper. For more information, see the section entitled *Selecting Paper*.
- Ensure you printed on the correct side of the paper. The print side is the bright white side of the paper.
- Ensure you do not have a moisture problem. Try drying the paper on the press or putting a paper towel behind the transfer when you heat press it. Read the section entitled *Moisture and Humidity* on the *Tips for Successful Sublimation* page.
- Verify that the printer's print heads are properly aligned. For further instructions, see the *EPSON Stylus C88 Printer User's Guide*.

My image has gaps or bands present

- Ensure that all of the printer's nozzles are firing properly. Perform a Nozzle Check from the *Utility* tab of your printer driver. For further instructions, see the *EPSON Stylus C88 Printer User's Guide*
- If one or more of the nozzles fail to print, perform a Print Head Cleaning. For further instructions, see the *EPSON Stylus C88 Printer User's Guide*.

Technical Support

If you are having difficulties achieving good results from your SubliJet IQ™ inks, you have several support options:

1. Telephone: You may contact your authorized SubliJet reseller during their normal hours of operation for assistance. A full listing of authorized SubliJet Resellers is available on our Web site at www.sublimation.com. In addition, you may also contact Sawgrass Technical Support at (843) 884-1575 between the hours of 8:00 AM and 5:30 PM Eastern Standard Time.

2. Internet: Visit the *Technical Support* area of the Sawgrass Technologies, Inc. website at www.sublimation.com. The troubleshooting utility found here will provide you with solutions to some of the most common problems. You may submit a detailed description of your problem if you need further assistance.

3. E-mail: You may e-mail Sawgrass Technical Support with a detailed description of your problem at support@sublimation.com.

4. Fax: You may fax a detailed description of your problem to Sawgrass Technical Support at (843) 849-3847.

Project Sublimation

Whether you are a current business owner adding sublimation to your line-up, a novice/intermediate sublimation user who would like to learn more, or an entrepreneur exploring the dye-sub industry, Project Sublimation is the industry's choice for practical, hands-on instruction. From equipment and product overview to marketing and pricing your products; from the science of sublimation to color management, our two-day, interactive workshop series will give you the background and know-how needed to run a full-service sublimation business.

At Project Sublimation workshop events, you will also have the opportunity to network with fellow sublimation users across the US and Canada. The new, enhanced Project Sublimation web site gives attendees access to the full business assets and forums, an invaluable resource for growing your sublimation business.

Isn't it time you took your business to the next level?

Project Sublimation travels to cities throughout the United States and Canada. Join us in a city near you for this dynamic, full-service workshop. Spend two days with one of our experts and get a leg up on your competition.

Please visit us on the web at www.ProjectSublimation.com or phone us toll free at 1.888.780.7349